

**Notice of Allowability**

Application No.

10/776,438

Examiner

Jerry Martin Blevins

Applicant(s)

GUNN ET AL.

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2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed September 29, 2006.
2. ☒ The allowed claim(s) is/are 18-25 and 37-50.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
  - a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:
  1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
  5. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.
    - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached
      - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
    - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☒ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 3/3/05
4. ☐ Examiner's Comment Regarding Requirement for Deposit  
of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_.
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

## DETAILED ACTION

### *Election/Restrictions*

Claim 37 is allowable. The restriction requirement among species, as set forth in the Office action mailed on October 19, 2005, has been reconsidered in view of the allowability of claims to the elected invention pursuant to MPEP § 821.04(a). **The restriction requirement is hereby withdrawn as to any claim that requires all the limitations of an allowable claim.** Claims 38-50, directed to an integrated optical apparatus, are no longer withdrawn from consideration because the claim(s) requires all the limitations of an allowable claim. However, claims 1-17, 26-36, and 51-99, directed to distinct inventions and/or species, remain withdrawn from consideration because they do not require all the limitations of an allowable claim.

In view of the above noted withdrawal of the restriction requirement, applicant is advised that if any claim presented in a continuation or divisional application is anticipated by, or includes all the limitations of, a claim that is allowable in the present application, such claim may be subject to provisional statutory and/or nonstatutory double patenting rejections over the claims of the instant application.

Once a restriction requirement is withdrawn, the provisions of 35 U.S.C. 121 are no longer applicable. See *In re Ziegler*, 443 F.2d 1211, 1215, 170 USPQ 129, 131-32 (CCPA 1971). See also MPEP § 804.01.

This application is in condition for allowance except for the presence of claims 1-17, 26-36, and 51-99 directed to inventions and/or species non-elected without traverse. Accordingly, claims 1-17, 26-36, and 51-99 have been cancelled.

***Allowable Subject Matter***

Claims 18-25 and 37-50 are allowed.

The following is an examiner's statement of reasons for allowance:

Regarding claim 18, the prior art, as best exemplified by US Patent to Myers et al., number 5,473,721, teaches an integrated optical apparatus (Figure 6) comprising: a planar waveguide on a substrate (column 5, lines 40-52); the waveguide having an elongate guiding portion (Figure 6) and a grating coupler (110); the grating coupler comprising a plurality of gratings having respective scatter-cross-sections adapted to scatter light along a portion of a predetermined optical path (Figure 6 and column 5, lines 40-52) and a gas-filled cavity (column 5, lines 40-52), at least a portion of which is in the substrate. However, Myers, either alone or in combination with the prior art, fails to disclose or render obvious that the cavity is positioned with respect to the gratings such that light scattered outside the portion of the optical path is reflected by the cavity towards the gratings. Rather, the gas-filled cavity of Meyers bends light along the path of the waveguide.

Claims 19-25 are allowed due to their dependence from allowed base claim 18.

Regarding claim 37, the prior art, as best exemplified by US Patent to Welch et al., number RE37,354, teaches an integrated optical apparatus (Figure 9), comprising: a planar waveguide (112) having an elongate guiding portion and a grating coupler (119), the coupler having a flared waveguide portion (114) comprising a relatively narrow end portion and a relatively wide end portion (Figure 9), the flared portion having a grating (119) positioned to couple light between the coupler and an optical element (column 10,

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lines 7-26 teach that the apparatus couples light without specifying an optical element, but an optical element would necessarily exist in order for the apparatus to couple light), wherein the grating comprises curved elongate scattering elements having curvatures defined by substantially elliptical paths (Figure 9) so as to couple plane waves between the waveguide grating coupler and the optical element. However, Welch, either alone or in combination with the prior art, neither discloses nor renders obvious that the scattering elements have respective scatter cross-sections which scatter light along at least a portion of a predetermined optical path for matching optical modes of plane waves in the guiding portion and in the optical element.

Claims 38-50 are allowed due to their dependence from allowed base claim 37.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jerry Martin Blevins whose telephone number is 571-272-8581. The examiner can normally be reached on Monday through Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571-272-2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JMB



Frank G. Font  
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